IN THE CLAIMS

Please cancel claims 1-2 and 13-14 without prejudice or disclaimer.

Please amend claims 3 and 15 as indicated below.

This listing of claims will replace all prior versions, and listings, of the claims in the Application.

Listing of Claims:

Claims 1-2 (cancelled)

Claim 3 (currently amended) ~~The data transmission system according to claim 2,~~ A data transmission system operable for transmitting packet data from an Internet Protocol (IP) host over an IP network comprising:

an IP layer;

a network layer coupled to the IP network, wherein said IP host is coupled to said IP network via a layer 2 network, said layer 2 network interfacing said IP network with a set of routers; and

a Multiple Address Resolution Protocol (MARP) layer, said MARP layer between said IP layer and said network layer, said MARP layer operable for selecting one router of said set of routers in response to a next hop IP address provided by said IP layer to said MARP layer when a packet of data is to be transmitted from said IP host over said IP network;

wherein said IP host is provided with an Address Resolution Protocol (ARP), said ARP operable to convert any IP address into a network address of a router to be used in said layer 2 network by mapping said IP address, in an ARP table into a network address of an active router selected from said set of routers;

wherein said MARP layer includes, a MARP table mapping said next hop IP address into a list of IP addresses of routers, said router addresses indicating routers selectable from said set of candidate routers, said IP addresses of said routers being mapped in said ARP table indicating active candidate routers able to be used as routers for transmitting said packet of data from said IP host to one or more of said workstations via said IP network.

Claim 4 (original) The data transmission system according to claim 3, wherein in one of said routers is selected amongst said active candidate routers by using hash coding techniques based upon destination IP addresses, a pair of source and destination ports in said packet of data to be transmitted, and said active candidate router IP addresses.

Claim 5 (original) A method of selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP layer and a network layer to a plurality of workstations by an intermediary of an IP network, and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers, said method comprising the steps of:

determining a list of candidate routers from said set of routers;

determining a list of active candidate routers from said list of candidate routers, said list of active candidate routers determined before selecting, from said set of routers, said router to be used for transmitting said packetized data; and

selecting said router to be used for transmitting said packetized data from said list of active candidate routers.

Claim 6 (original) The method according to claim 5, wherein said step of determining said list of active candidate router IP addresses is performed by a Multiple Address Resolution Protocol (MARP) layer between said IP layer and said network layer of said IP host.

Claim 7 (original) The method according to claim 6, wherein said step of determining said list of candidate routers is performed by said MARP layer by a look up in a MARP table using a next hop IP address as an entry.

Claim 8 (original) The method according to claim 7, wherein said step of selecting said router to use for transmitting said packetized data is performed by using hash coding techniques based upon destination IP addresses, a pair of source and destination ports in said packetized data to be transmitted, and IP addresses of said active candidate routers.

Claim 9 (original) A computer program product embodied in a machine readable medium, including programming for selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP layer and a network layer to a plurality of workstations by an intermediary of an IP network, and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers comprising a program of instruction for performing the steps of:

determining a list of candidate routers from said set of routers;

determining a list of active candidate routers from said list of candidate routers, said list of active candidate routers determined before selecting, from said set of routers, said router to be used for transmitting said packetized data; and

selecting said router to be used for transmitting said packetized data from said list of active candidate routers.

Claim 10 (original) The computer program product according to claim 9, wherein said step of determining said list of active candidate router IP addresses is performed by a Multiple Address Resolution Protocol (MARP) layer between said IP layer and said network layer of said IP host.

Claim 11 (original) The computer program product according to claim 10, wherein said step of determining said list of candidate routers is performed by said MARP layer by a look up in a MARP table using a next hop IP address as an entry.

Claim 12 (original) The computer program product according to claim 11, wherein said step of selecting said router to use for transmitting said packetized data is performed by using hash coding techniques based upon destination IP addresses, a pair of source and destination ports in said packetized data to be transmitted, and IP addresses of said active candidate routers.

Claims 13-14 (cancelled)

Claim 15 (currently amended) ~~The IP network according to claim 14,~~ An Internet Protocol (IP) network comprising:

>an IP host;

>a Local Area Network (LAN) coupled to the IP host;

>an IP network coupled to the LAN;

>a set of workstations coupled to the LAN via the IP network;

>said IP host further comprising:

>>an IP layer;

>>a network layer coupled to the IP network, wherein said IP host is coupled to said IP network via a layer 2 network, said layer 2 network interfacing said IP network with a set of routers; and

>>a Multiple Address Resolution Protocol (MARP) layer, said MARP layer between said IP layer and said network layer, said MARP layer operable for selecting one router of said set of routers in response to a next hop IP address provided by said IP layer to said MARP layer when a packet of data is to be transmitted from said IP host over said IP network;

>>wherein said IP host is provided with an Address Resolution Protocol (ARP), said ARP operable to convert any IP address into a network address of a router to be used in said layer 2 network by mapping said IP address, in an ARP table into a network address of an active router selected from said set of routers;

wherein said MARP layer includes, a MARP table mapping said next hop IP address into a list of IP addresses of routers, said router addresses indicating routers selectable from said set of candidate routers, said IP addresses of said routers being mapped in said ARP table indicating active candidate routers able to be used as routers for transmitting said packet of data from said IP host to one or more of said workstations via said IP network.

Claim 16 (original) The IP network according to claim 15, wherein in one of said routers is selected amongst said active candidate routers by using hash coding techniques based upon destination IP addresses, a pair of source destination ports in said packet of data to be transmitted, and said active candidate router IP addresses.